



# State of Utah

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September 19, 2002

**TO:** Internal File

**THRU:** Karl R. Houskeeper, Sr. Reclamation Specialist/Team Lead *KRH by an*

**FROM:** Dana Dean, P.E., Reclamation Specialist/Hydrology *DD*

**RE:** South Portals, Genwal Resources, Inc., Crandall Canyon Mine, C/015/032-02A

**SUMMARY:**

Proposed changes to Genwal Resources, Inc.'s Crandall Canyon Mine were received on July 17, 2002. These changes involve the construction of new portals in the coal outcrop in the southern portion of the disturbed area. The plan calls for one new culvert to be placed beneath the ramp leading to the new portals. This memo addresses the Hydrology portion of the proposed plan.

Information found in the proposal is not considered adequate to meet the requirements of the regulations.

The Permittee should make the requisite changes to the proposal as necessary and resubmit the proposal to meet the requirements of the regulations.

**TECHNICAL ANALYSIS:****OPERATION PLAN****HYDROLOGIC INFORMATION**

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

**Analysis:****Diversions: General**

It is unclear in the plan which diversions are already in place, and which are in the planning stages. Pages 1 and 9 of Appendix 7-4 refer to *three* new culverts, though C-11A is the only one that has not been installed. The information provided in the plan should be current, including the use of the proper verb tense when referring to the culverts.

**Diversions: Miscellaneous Flows**

The plan proposes to add one new culvert in the South Portal area. Culvert C-11A will be placed under the proposed access ramp leading up to the South Portals. This culvert will divert sheet flow drainage from the upper material yard to existing diversions that will carry the flow to the sedimentation pond. Calculations for sizing the culvert were performed using the SCS- TR55 method and Manning's equation, and can be found in Appendix 7-4.

**Stream Buffer Zones**

According to Plate 7-5, portal construction will take place within 100' of Crandall Creek, a perennial stream. However, this will not affect the quality or quantity of flow in Crandall Creek since the Main Canyon Culvert protects it. The Main Canyon Culvert is 6 feet in diameter and follows the natural channel through the mine site.

**Siltation Structures: Sedimentation Ponds**

The disturbed area will not be increased and the existing sedimentation pond was originally sized to accommodate the South Portal expansion. The existing pond should be adequate to control all disturbed area runoff, including that from the new culvert, C-11A.

**Findings:**

Information provided in the application is not considered adequate to meet the minimum Hydrologic Information requirement of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

**R645-301-121.100,** The plan must contain current diversion information. The Sedimentation and Control Plan in Appendix 7-4 is unclear as to which culverts have been placed on the property and which are still in the planning stage. This must be updated.

**MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

**Analysis:**

**Mining Facilities Maps**

Diversion Ditch 12 is labeled twice on the map, one label does not seem to refer to any accompanying line. The map should be cleared up to omit unnecessary labels and make proper reference to existing and proposed structures.

There is also some confusion as to the length of DD-12. In the existing MRP, it is listed as 560 feet in length, though the accompanying map shows it to be closer to 100 feet. In the current proposal, it is listed as 50 feet in length and is shown as such on the map. This needs to be cleared up.

**Certification Requirements**

A registered professional engineer has stamped plates 7-5, 5-2, and 5-3 but the stamp was not validated with a signature and date. The stamp should be signed and dated by the P.E.

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**TECHNICAL MEMO**

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**Findings:**

Information provided in the application is not considered adequate to meet the minimum Maps, Plans and Cross Sections of Mining Operations requirement of the Regulations. Prior to approval, the Permittee must provide the following in accordance with:

**R645-301-121.200**, The maps and text in the plan must be clear and concise. The location of DD-12 must be properly marked and any improper labels must be omitted from the maps. Lengths reported in the text must coincide with measured lengths on the maps.

**R645-301-512 and R156-22-701(c)**, Plates 7-5, 5-2, and 5-3 must be revised and submitted to the Division with the proper P.E. certification (signed and dated).

**RECOMMENDATION:**

Prior to approval, the requirements of R645-301-512, R156-22-701(c), and R645-301-121.200 must be met as outlined above.